AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act as amended (33 U.S.C. §§1251 et eq.; the "CWA"), and the Massachusetts Clean Waters Act, as amended (M.G.L. Chap. 21, §§26-53),

Town of North Brookfield

is authorized to discharge from a facility located at

North Brookfield Wastewater Treatment Facility
59 East Brookfield Road
North Brookfield, MA

to receiving water named **Forget-Me-Not Brook**

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective **

This permit and the authorization to discharge expire at midnight five years from effective date.

This permit supersedes the permit issued on September 16, 2002.

This permit consists of 10 pages in Part I, including effluent limitations and monitoring requirements, Part II, including General Conditions and Definitions, and Attachment A, the toxicity testing protocols.

Signed this day of

Director Office of Ecosystem Protection Environmental Protection Agency Boston, MA	Director Division of Watershed Management Department of Environmental Protection Commonwealth of Massachusetts Boston, MA

****** This permit will become effective on the date of signature if no comments are received during public notice. If comments are received during public notice, this permit will become effective 60 days after signature.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning with the effective date and lasting through expiration, the permittee is authorized to discharge treated effluent from outfall number 001. Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Units	Discharge Limitation			Monitoring Requirement	
		Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type[2]
Flow[1]	MGD	0.76	----	----	Continuous	Recorder
Flow[1]	MGD	Report	----	Report	Continuous	Recorder
BOD[3] *(May 1- October 31)*	mg/l	15	22	-----	1/Week	24-Hour Composite[4]
	lbs/day	95	139			
	mg/l	30	45			
	lbs/day	190	285			
(November 1- April 30)						
TSS[3] *(May 1-October 31)*	mg/l	15	22	-----	1/Week	24-Hour Composite[4]
	lbs/day	95	139			
(November 1- April 30)	mg/l	30	45			
	lbs/day	190	285			
pH	S.U.	(See Condition I.A.1.a on page 5)			1/Day	Grab
Fecal Coliform Bacteria[5]	cfu/100 ml	200	----	400	1/Week	Grab
Ammonia-Nitrogen						
(May 1- October 31)	mg/l	1.0	1.5	-----	1/Week	24-Hour Composite[4]
	lbs/day	6.3	9.5			
(November 1- April 30)	mg/l	5.4	Report			
	lbs/day	34.3	Report			

Effluent Characteristic	Units	Discharge Limitation			Monitoring Requirement	
		Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type[2]
TKN, Nitrite & Nitrate Nitrogen	mg/l	Report	-----	-----	1/Quarter	24-Hour Composite[4]
	lbs/day	Report				
Total Phosphorus						
(April 1-October 31)	mg/l	0.2	-----	Report	1/Week	24-Hour Composite[4]
	lbs/day	Report	-----	-----		
(November 1- March 31)	mg/l	1.0	-----	Report	1/Month	
	lbs/day	Report	-----	-----		
Dissolved Orthophosphorous	mg/l	Report	-----	Report	1/Month	24-Hour Composite[4]
(November 1 - March 31) Total Copper	ug/l	5.2	-----	7.3	1/Month	24-Hour Composite[4]
Total Zinc	ug/l	66.6	-----	66.6	1/Month	24-Hour Composite[4]
Total Aluminum	ug/l	87	-----	750	1/Month	24-Hour Composite[4]
LC_{50} [6,7,9]	%		100%		4/year	24-Hour Composite[4]
Chronic NOEC [6,8,9]	%		100%		4Year	24-Hour Composite[4]
Dissolved Oxygen	mg/l		>5.0		1/Week	Grab
(May 1- October 31)						

Footnotes:

1. Report annual average, monthly average, and the maximum daily flow. The limit is an annual average, which shall be reported as a rolling average. The value will be calculated as the arithmetic mean of the monthly average flow for the reporting month and the monthly average flows of the eleven previous months.

2. All sampling shall be representative of the influent and the effluent that is discharged through outfall 001 to the Forget-Me-Not Brook. A routine sampling program shall be developed in which samples are taken at the same location, same time and same days of every month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable discharge monitoring report that is submitted to EPA. In addition, all samples shall be analyzed using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136.

3. Sampling required for influent and effluent.

4. A 24-hour composite sample will consist of at least twenty-four (24) flow proportioned grab samples taken during one consecutive 24 hour period (e.g. 0700 Monday- 0700 Tuesday).

5. Fecal coliform monitoring and effluent limits will be in effect for the period **May 1- October 31**. This is a state certification requirement. The monthly average limit is expressed as a geometric mean.

6. The permittee shall conduct chronic and modified acute toxicity test four times per year. The permittee shall test the daphnid specie, Ceriodaphnia dubia. The test samples shall be collected in **second week of February, May, August, and November**. Results are to be submitted by the **30th day of the month after the sample, i.e. March, June, September, and December**. See Permit Attachment A, Toxicity Test Procedure and Protocol.

7. The LC_{50} is the concentration of effluent which causes mortality to 50% of the test organisms. Therefore, a 100% limit means that a sample of 100 % effluent (no dilution) shall cause no more that a 50% mortality rate.

8. C-NOEC (chronic-no observed effect concentration) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life cycle or partial life cycle test which causes no adverse effect on growth, survival, or reproduction at a specific time of observation as determined from hypothesis testing, where the test results exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, the permittee must report the lowest concentration where there is no observable effect. The 100% limit is defined as a sample which is composed of 100% effluent

9. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall follow procedures outlined in **Attachment A Section IV., DILUTION WATER** in order to obtain permission to use an alternate dilution water. In lieu of individual approvals for alternate dilution water required in **Attachment A**, the permittee may obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water, by following the procedure outlined in the "NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs) Report Year 2004" (Attachment G, Common Pitfalls and Guidance, 14. **Dilution Water)**. If this Guidance is revoked, the permittee shall revert to obtaining approval as outlined in **Attachment A**. The Instructions along with the annual set of DMRs are sent to all permittes separately and are not intended as a direct attachment to this permit. Any modification or revocation to this "Guidance Document" will be transmitted to the permittees as part of the annual DMR instruction package. However, at any time, the permittee may choose to contact EPA-New England directly using the approach outlined in **Attachment A**.

PART I.A.1 (continued)

a. The pH of the effluent shall not be less than 6.5 S.U., nor greater than 8.3 S.U. at any time.

b. The discharge shall not cause objectionable discoloration of the receiving waters.

c. The effluent shall contain neither a visible oil sheen, or foam, nor floating solids at any time.

d. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both total suspended solids and biochemical oxygen demand. The percent removal shall be based on monthly average values.

2. All POTWs must provide adequate notice to the Director of the following:

a. Any new introduction of pollutants into that POTW from an indirect discharger in a primary industry category discharging process water; and/or

b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

c. For purposes of this paragraph, adequate notice shall included information on:

1. The quantity and quality of effluent introduced into the POTW; and

2. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

3. Prohibitions Concerning Interference and Pass Through:

   a. Pollutants introduced into POTWs by a non-domestic source shall not pass through the POTW or interfere with the operation or performance of the works.

4. Toxics Control

   a. The permittee shall not discharge any pollutant or combinations of pollutants in toxic amounts.

   b. Any toxic components of the effluent shall not result in any demonstrable harm to aquatic life or violate any state or federal water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this permit may be revised or amended in accordance with such standards.

   c. The permittee shall not discharge chlorine.

5. Numerical Effluent Limitations for Toxicants

   EPA or MassDEP may use the results of the toxicity tests and chemical analyses conducted pursuant to this permit, as well as national water quality criteria developed pursuant to Section 304(a)(1) of the Clean Water Act (CWA), state water quality criteria, and any other appropriate information or data, to develop numerical effluent limitations for any pollutants, including by not limited to those pollutants listed in Appendix D of 40 CFR Part 122.

B. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall listed in Part I.A.1 of this permit.. Discharge of wastewater from any other surface water point source is not authorized by this permit and shall be reported in accordance with Section D.1.e.(1) of the General Requirements of this permit (Twenty-four hour reporting).

C. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

Operation and maintenance of the sewer system shall be in compliance with the General Requirements of Part II and the following terms and conditions:

1. Maintenance Staff

   The permittee shall provide adequate staff to carry out the operation, maintenance, repair and testing functions required to ensure compliance with the terms and conditions of this permit.

2. Infiltration/Inflow

The permittee shall develop and implement a plan to control infiltration and inflow (I/I) to the separate sewer system. The plan shall be submitted to EPA and Mass DEP **within six months of the effective date of this permit** (see page 1 of this permit for the effective date) and shall describe the permittee's program for preventing infiltration/inflow related effluent limit violations, and all unauthorized discharges of wastewater, including overflows and by-passes due to excessive infiltration/inflow.

The plan shall include:

- An ongoing program to identify and remove sources of infiltration and inflow. The program shall include the necessary funding level and the source(s) of funding.

- An inflow identification and control program that focuses on the disconnection and redirection of illegal sump pumps and roof down spouts. Priority should be given to removal of public and private inflow sources that are upstream from, and potentially contribute to, known areas of sewer system backups and/or overflows

- Identification and prioritization of areas that will provide increased aquifer recharge as the result of reduction/elimination of infiltration and inflow to the system.

- An educational public outreach program for all aspects of I/I control, particularly private inflow.

Reporting Requirements:

A summary report of all actions taken to minimize I/I during the previous calendar year shall be submitted to EPA and the Mass DEP annually, *by March 31*. The summary report shall, at a minimum, include:

- A map and a description of inspection and maintenance activities conducted and corrective actions taken during the previous year.

- Expenditures for any infiltration/inflow related maintenance activities and corrective actions taken during the previous year

- A map with areas identified for I/I-related investigation/action in the coming year.

- A calculation of the annual average I/I, the maximum month I/I for the reporting year.

- A report of any infiltration/inflow related corrective actions taken as a result of unauthorized discharges reported pursuant to 314 CMR 3.19(20) and reported pursuant to the Unauthorized Discharges section of this permit

3. Alternate Power Source

   In order to maintain compliance with the terms and conditions of this permit, the permittee shall continue to provide an alternative power source with which to sufficiently operate its treatment works (as defined at 40 CFR § 122.2).

D. SLUDGE CONDITIONS

1. The permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices and with the CWA Section 405(d) technical standards.

2. The permittee shall comply with the more stringent of either state or federal requirements.

3. The technical standards (Part 503 regulations) apply to facilities which perform one or more of the following use or disposal practices.

   a. Land application - the use of sewage sludge to condition or fertilize the soil
   b. Surface disposal - the placement of sewage sludge in a sludge-only landfill
   c. Placement of sludge in a municipal solid waste landfill.

4. These conditions do not apply to facilities which transport sewage sludge to another facility for use or disposal or which do not use or dispose of sewage sludge (e.g. lagoons - reed beds); or material described in 40 CFR 503.6 (Exclusions).

5. The permittee shall use and comply with the attached guidance document to determine appropriate conditions. Appropriate conditions contain the following elements:

   - General requirements
   - Pollutant limitations
   - Operational standards (pathogen reduction requirements and vector attraction reduction requirements)
   - Management practices
   - Record keeping
   - Monitoring
   - Reporting

   Depending upon the quality of material produced by a facility, all conditions may not apply to the facility.

6. The permittee shall monitor the pollutant concentrations, pathogen reduction and vector attractions reduction at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year.

Sludge Volume (dry metric tons/year)	Monitoring Frequency
less than 290	1/year
290 to less than 1500	1/quarter
1500 to less than 15,000	6/year
15,000+	1/month

7. The permittee shall sample the sewage sludge using the procedures detailed in 40 CFR 503.8.

8. The permittee shall submit an annual report containing the information specified in the guidance by **February 19.** Reports shall be submitted to the address contained in the reporting section of the permit. Sludge monitoring is not required by the permittee when the permittee is not responsible for the ultimate sludge disposal. The permittee must be assured that any third party contractor is in compliance with appropriate regulatory requirements. In such case, the permittee is required only to submit an annual report by **February 19** containing the following information:

- Name and address of contractor responsible for sludge disposal
- Quantity of sludge in dry metric tons removed from the facility by the sludge contractor

E. MONITORING AND REPORTING

1. Reporting

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report Forms(s) postmarked no later than the **15th day of the month** following the effective date of the permit.

Signed and dated originals of these, and all other reports required herein, shall be submitted to the Director and the State at the following addresses:

Environmental Protection Agency
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114

The State agency is:

Massachusetts Department of Environmental Protection
Bureau of Resource Protection
Central Regional Office

627 Main Street
Worcester, MA 01608

Signed and dated Discharge Monitoring Report forms and toxicity test reports required by this permit shall also be submitted to the State at:

Massachusetts Department of Environmental Protection
Division of Watershed Management
Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, MA 01608

E STATE PERMIT CONDITIONS

1. This discharge permit is issued jointly by the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) under federal and state law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the MassDEP pursuant to M.G.L. Chap. 21, §43.

2. Each agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension, or revocation of this permit shall be effective only with respect to the agency taking such action, and shall not affect the validity or status of this permit as issued by the other agency, unless and until each agency has concurred in writing with such modification, suspension, or revocation. In the event any portion of this permit is declared invalid, illegal, or otherwise issued in violation of state law such permit shall remain in full force and effect under federal law as an NPDES permit issued by the U.S. Environmental Protection Agency. In the event this permit is declared invalid, illegal or otherwise issued in violation of federal law, this permit shall remain in full force and effect under state law as a permit issued by the Commonwealth of Massachusetts.